

2 July 2020

## ROMANIA WELL FLOW TEST OPERATIONS UPDATE 3 “Ilecea Mica -1 well has been perforated and the test programme is ongoing”

### Key Points:

- 🔥 **Well Production Equipment** has been run into the well and perforated to initiate flow from the Lower Pannonian “Pa IV” gas reservoir (The Pa V and Pa III potential gas reservoirs were not perforated during the current operations).
- 🔥 **Workover Rig** is being demobilised as it is no longer required for ongoing flow assessment work.
- 🔥 **Further diagnosis** work is ongoing utilising wire line following rig demobilisation, including down hole pressure measurement and sampling of reservoir fluids.
- 🔥 **Reservoir Damage** has potentially occurred and following further diagnostic work as well as acidisation of the well may be implemented to enhance flow. *Acidisation* is required to break down mud filter cake which builds up around the well bore and is a relatively common practice for Pannonian reservoirs which are commonly composed of carbonate cement. Rock Typing work has also been identified carbonate cement (Siderite) in the currently tested Pa IV reservoir.
- 🔥 **Further Flow Testing Results** will be ongoing over the coming weeks including down hole pressure measurement, fluid sampling and future stimulation or further testing programs.
- 🔥 **Results to date** include gas pay seen on down hole logs and gas shows encountered while drilling as well as historic well results which flowed at approximately 1 MMSCFPD.

ADX Energy Ltd (ASX Code: **ADX**) advises the following update regarding ongoing well flow testing work at the Ilecea Mica-1 (IMIC-1) well site at the Ilecea Mare Production License onshore Romania.

The production equipment required to flow test the well has been run into the well and the well has been perforated to initiate flow from the Pa IV gas reservoir. Some inflow from the well is evident from wellhead measurements at surface following well perforation and nitrogen treatment to minimise the pressure against the Pa IV gas reservoir, however gas flow to surface from the well has not yet been achieved. The well has been checked utilising electric line logging equipment which confirmed the perforation guns have indeed been fired across the PA IV reservoir.

The flow test results to date suggest reservoir damage and mud filtrate build up around the well bore given that the IMIC-1 well encountered good reservoir porosity (20% within the net pay gas

zone) and gas saturations in the Pa IV sandstone reservoir based on electric wireline logs and gas shows (gas inflow to the drilling mud) while drilling late last year. In addition, well test results from the nearby historic well drilled in the mid 80's flowed at up to 1 MMSCFPD and subsequent cuttings from IMIC-1 drilling analysis together with modern petrophysical analysis from the well logs indicated good Pa IV gas reservoir permeability.

The workover rig used to run the well production equipment prior to testing is being demobilised as it is no longer required for ongoing flow assessment work. Further down hole pressure measurement and sampling of reservoir fluids work will be undertaken utilising low-cost wire line equipment following rig demobilisation.

The potential reservoir damage and mud filtrate damage build up around the well bore, may have resulted in the blocking of reservoir fluids due to mud ingress into the reservoir and the build-up of nonpermeable filtrate from drilling mud. This damage can be overcome with acidisation, which is a routine practice within these reservoirs in the Pannonian basin where carbonate cement within the reservoir matrix containing movable hydrocarbons is common. Modern rock typing work has indeed established the presence of carbonate cement (Siderite) within the Pa IV reservoir. A nearby oil well (2.5 km to the north) also required acidization prior to initial commercial flow.

ADX will assess the potential for stimulation and clean up using acidisation to initiate commercial well flows following the ongoing down hole pressure and sampling work mentioned above. ADX believes the equipment required to acidise and flow test the well will be readily available.

Further flow testing results will be provided to shareholders over the coming weeks including the analysis of down hole pressure measurement and fluid sampling as well as the results of any future clean up stimulation or testing programs.

#### **Background Regarding IMIC -1 Drilling Results and Testing Objectives**

*(Refer to ADX Release dated 9/9/2019 and note that ADX is not aware of any information or data that materially affects the original estimates).*

The IMIC -1 well encountered gas across three zones with a combined total arithmetic sum for the three zones of 20 BCF 2C contingent resources estimated (refer to table below). The well was suspended for future completion as a producer following testing. Testing was deferred until down hole well production equipment was manufactured and then further delayed due to border closures caused by the Covid-19 pandemic which have prevented testing operations until now.

Testing will concentrate on the PA IV sand (Pliocene age) which is a proven reservoir and has the greatest upside reserves potential of the 3 hydrocarbon bearing reservoir intervals intersected in the IMIC-1 well (refer to table below). This reservoir unit has a large stratigraphic upside potential which will be further quantified in the near future with the planned high resolution 2D seismic program scheduled for the third quarter of 2020.

The testing program has been designed to determine the production capacity of the well through multiple flow rate measurements and pressure build up response measurements. Produced gas will be sampled to determine the suitability of the IMIC-1 gas composition for commercial sales.

The expectation based on mudlog data and nearby analogues is that a dry gas will be produced which will require minimal processing prior to market delivery.

Following the completion of the production testing program, the well will be shut in awaiting commercial production at a future time.

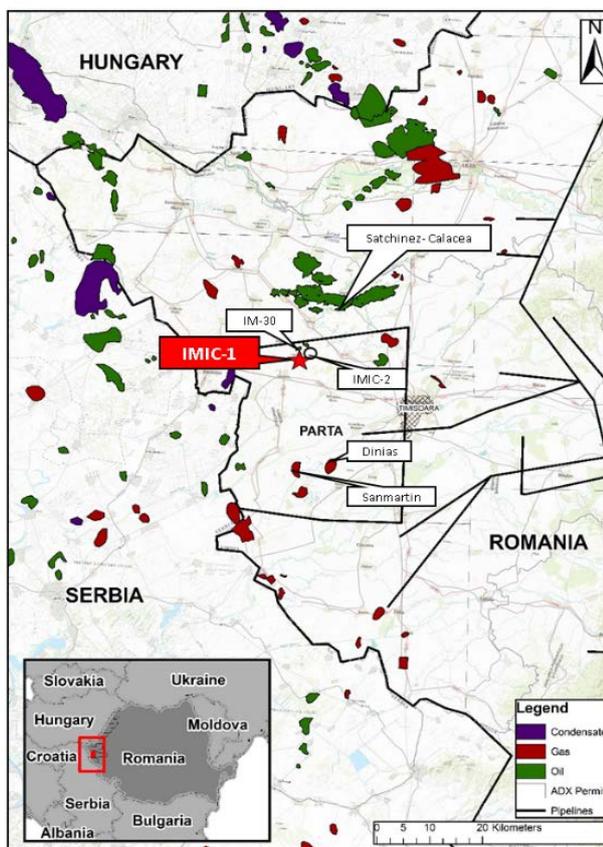
IMIC-1 Contingent Recoverable Resources Estimates <sup>(Note 1)</sup>					
Discovery Well	Hydrocarbon Reservoir	Reservoir Top Depth (meters MD)	1C (bscf)	2C (bscf)	3C (bscf)
IMIC-1	Pa III	1851	1.9	2.7	3.9
IMIC-1	Pa IV	2033	3.0	11.0	40.0
IMIC-1	Pa V	2140	2.3	6.3	10.8
TOTAL Arithmetic Sum of Recoverable Volumes (bscf)			7.2	20.0	54.7

*(Refer ADX Release dated 9/9/2019 and note that ADX is not aware of any information or data that materially affects the original estimates)*

**Note 1:** Contingent Resources are those quantities of petroleum estimated, as at a given date, to be potentially recoverable from known accumulations but, for which the applied project(s) are not yet considered mature enough for commercial development due to one or more contingencies. 1C, 2C, 3C Estimates: in a probabilistic resource size distribution these are the estimates that have a respectively 90% (P90), 50% (P50) and 10% (P10) probability that the quantities actually recovered will be exceeded.

### Gas Resource Assessment

The resource potential of the three gas reservoirs intersected at IMIC -1 will be further assessed utilising high resolution 2D seismic that will be acquired across IMIC-1 and potential IMIC-2 accumulations. The appraisal seismic is expected to better define the extent of gas zones where ADX has interpreted substantial stratigraphic resource upside (refer to ASX announcement on 9 September 2019). The appraisal seismic will be acquired in conjunction with the planned 3D seismic program during the 3<sup>rd</sup> quarter of 2020 in close proximity to the IMIC -1 and the IMIC-2 wells.



Location Map showing IMIC-1 location and the surrounding Parta exploration license

**Asset Ownership Structure**

ADX holds a 49% shareholding in Danube Petroleum Limited (Danube). The remaining shareholding in Danube is held by Reabold Resources PLC. Danube via its Romanian subsidiary, ADX Energy Panonia srl, holds:

- a 100% interest in the Parta Exploration license in Romania (including a 100% interest in the Parta Sole Risk Area). Upon completion of a farmin by Tamaska Oil & Gas Limited’s subsidiary Parta Energy, Danube will hold a 50% interest in the Parta Exploration License; and
- a 100% interest in the Iecea Mare Production license in Romania (which hosts the IMIC-1 well and future IMIC-2 well).

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**END OF THIS RELEASE** - Authorised for lodgement by Ian Tchacos, Executive Chairman

## ***Disclaimer***

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## ***Persons compiling information about Hydrocarbons.***

Pursuant to the requirements of the ASX Listing Rules 5.41 and 5.42, the technical and resource information contained in this presentation has been reviewed by Paul Fink, Technical Director of ADX Energy Limited. Mr. Fink is a qualified geophysicist with 23 years of technical, commercial and management experience in exploration for, appraisal and development of oil and gas resources. Mr. Fink has reviewed the results, procedures and data contained in this presentation and considers the resource estimates to be fairly represented. Mr. Fink has consented to the inclusion of this information in the form and context in which it appears. Mr. Fink is a member of the EAGE (European Association of Geoscientists & Engineers) and FIDIC (Federation of Consulting Engineers).